

FAIRFAX COUNTY, VIRGINIA

MEMORANDUM

TO: Board of Supervisors

FROM: John J. Adair, Auditor to the Board
Office of Financial and Programs Auditor

DATE: November 28, 2006

SUBJECT: Quarterly Status Report on Operations

EXECUTIVE SUMMARY

This quarter, we reviewed Value Engineering studies conducted by the County for capital construction projects and found that implementation of study recommendations has resulted in savings of \$22.7 million on 31 projects since the County began using the Value Engineering process in Fiscal Year 1998.

Since July 2004, when we last reported on Value Engineering, savings of \$9.4 million have been achieved on 13 construction projects.

As requested by the Board, we also calculated savings achieved through audits by our office, working with our Audit Committee, and determined they totaled about \$11.2 million since Fiscal Year 1998. Savings for the past three years, since we last reported on this issue to the Board, were about \$4.77 million.

Fuel consumed by County vehicles, since the imposition of tighter controls over the use of miscellaneous codes to dispense fuel, continued to decrease. Fuel consumed from June through October 2006 declined by 14,000 gallons compared to the prior fiscal year.

This decline has saved the County about \$31,000 thus far, and would save about 33,700 gallons and \$74,000 over the course of a year at the current rate of usage and the price of fuel paid by the County.

Construction of the Public Safety and Transportation Operations Center (PSTOC), which was started by the Manhattan Construction Company in August 2006, continued to progress on schedule and within budget.

The County also moved closer to issuing a contract for a Computer Aided Dispatch (CAD) and Records Management System (RMS) that represent major components of Information Technology systems that will be used within the PSTOC facility. Acquisition of these systems, and the other Information Technology systems needed for the facility, also are on schedule and within budget.

SAVINGS ACHIEVED USING VALUE ENGINEERING

At the request of the Audit Committee, during this quarter we reviewed the savings achieved by the County through its implementation of Value Engineering concepts in the construction of certain projects.

We found that since September 1997, County agencies have saved about \$22.7 million in construction costs by using the Value Engineering concept on 31 projects. The cost of the 31 studies was about \$717,000.

Savings since July 2004, when we last reported on Value Engineering savings, totaled about \$9.4 million on 13 construction projects.

The Value Engineering Concept

On June 23, 1997, the Board of Supervisors adopted a policy requiring the use of Value Engineering for capital projects. This policy is incorporated in Procedural Memorandum 25-01, dated September 22, 1997.

According to the Procedural Memorandum, Value Engineering is to be applied to projects involving (1) buildings (libraries, fire stations, governmental centers, etc.) with estimated construction costs greater than \$5 million, and (2) County highway, neighborhood improvement, utility, and other “horizontal” projects with estimated construction costs in excess of \$2 million.

Value Engineering is defined as “the systematic application of recognized techniques by multi-disciplined team(s) that identifies the function of a product or service; establishes a worth for that function; generates alternatives through the use of creative thinking; and provides the needed functions, reliably, at the lowest overall cost.”

Three basic precepts are essential for Value Engineering. They are:

- An organized project review,
- A function-oriented approach to identify the essential project functions, and
- Creative thinking to explore alternative ways of performing the essential project functions.

The Procedural Memorandum requires the performance of Value Engineering at the preliminary design stage (when design is 35 percent complete) for both horizontal and vertical construction projects. The requirement for mandatory Value Engineering is to be based on the construction cost estimated upon completion of the 35 percent complete

design documents. The construction cost estimate is to represent a true estimated cost to construct the facility exclusive of change orders or construction contingencies.

Value Engineering studies may be conducted in-house, by a qualified (Certified Value Specialist) Value Engineering consultant, or by using a combination of in-house staff and a consultant. All in-house studies are to include team leaders that have a minimum of 40 hours of formal Value Engineering training.

Upon completion of the Value Engineering study, the study recommendations are to be evaluated by the project managers and impacted agencies, and all recommendations are to be presented to the Director of the agency responsible for the design. After review by the appropriate Director, the final disposition of the recommendations is to be documented and made part of the project file. Brief written explanations are to be provided for those recommendations not accepted.

Savings from Value Engineering Studies

We reviewed the implementation of Value Engineering for the construction of capital projects that could fall within the requirements of the County's policy. County staff provided us with studies that showed that Value Engineering studies on 31 projects had resulted in savings of about \$22.7 million at a cost of about \$717,000 for the studies.

The Department of Public Works and Environmental Services generally conducts the Value Engineering studies. The Department provided us with information on 30 construction projects undertaken that met the requirements for Value Engineering as set forth in the Procedural Memorandum. This includes one study conducted jointly with the Park Authority for the construction of the West County Recreation Center.

This information shows that the Department was able to save almost \$21.9 million using the Value Engineering concept. The cost of the 30 studies was about \$701,000.

In addition, the Department of Housing and Community Development staff identified one construction project (Herndon Harbor House, Phase II, Buildings 1, 3C, and Adult Day Care facility) where they were able to save about \$800,000 through Value Engineering. The cost of the study was about \$16,000. This brought the total savings for the 31 studies to \$22.7 million at a cost of about \$717,000 for the studies.

Overall, the County staff said they had implemented about 52% of VE study recommendations made since the inception of the County program in 1997, with a rate of return for those studies of about 32 to 1. These numbers are lower than, but comparable to, the Virginia Department of Transportation (VDOT), which has accepted about 55% of study recommendations, and achieved a return on investment of 43 to 1 since they introduced value engineering in 1990.

VDOT's VE program is recognized as a leader in the field of value engineering. We noted that the VDOT return on investment, which was about 39 to 1 three years ago, was skewed higher by the results of studies in Fiscal Year 2005 which produced a return on investment of 254 to 1.

**SAVINGS ACHIEVED THROUGH
THE AUDIT COMMITTEE AND
THE AUDITORS TO THE BOARD**

The Office of Financial and Program Audit, also known as the Auditors to the Board, is the external auditor for the County, reporting to the Board of Supervisors through an Audit Committee comprised of four Board members and two private citizens. The County also has an Internal Audit Office that reports to the County Executive.

In March 2003, the Board of Supervisors asked that a summary of cost savings for the six year period since the Auditor to the Board had been hired be provided to the Board. The savings at that time amounted to about \$6,417,000.

This year, the Board of Supervisors asked for an update on the savings. Total savings that we have been able to quantify now amount to about \$11,183,595.

Since the previous reported savings, there have been savings of about \$4,766,595 as follows:

- \$1,659,676 in proffer money, collected over a period of years and erroneously being held in escrow as future construction money, was provided to the County's Transportation Department for its Roadway Improvement Fund;
- \$1,950,000 in savings through the reduction of 167 underutilized County vehicles from the fleet between January 2005 and September 2006;
- \$865,000 saved through elimination of vehicle maintenance since January 2005 on the 167 underutilized vehicles ordered turned in to the County;
- \$261,035 representing a decrease in County travel expenses in Fiscal Year 2005 from Fiscal Year 2004 due to revised local travel policies (see discussion below); and
- \$30,884 in reduced fuel costs due to improved controls over fuel (see report section below).

Calculation of Savings **Involving Travel Expenses**

The Board of Supervisors had asked our office, in April 2004, to review, with County staff, the County's employee travel policy.

We reported in September 2004 that the County was revising its travel policy regarding, among other things, the reimbursement of employees for the cost of lodging expenses.

The previous County policy had been to have County employees "use prudent judgment and seek to minimize cost when making travel arrangements", "travel by the most economical means", and "ensure that travel expenses are reasonable and necessary".

The County, in 2004, did not specify maximum allowable reimbursable lodging rates for cities to which County employees travel. The determination as to whether or not the lodging expense was reasonable was made by the agency head. Opinions varied among agency heads regarding what constituted a reasonable lodging expense.

As part of this project, the Department of Finance conducted a survey of lodging travel policies among the Federal Government, the Commonwealth of Virginia, and surrounding jurisdictions. Finance Department staff told us that this survey showed that all of the neighboring jurisdictions relied on agency judgment, similar to the County policy.

The survey also showed that both the Federal Government and the Commonwealth of Virginia had stricter and more tangible standards for lodging. Both entities rely on the Federal Government's per diem lodging rates for U. S. cities and cities abroad, as set forth in the U. S. General Services Administration's web site and the U. S. Department of State's web site, respectively.

The Chief Financial Officer, the Director of the Department of Finance, Department of Management and Budget representative and our Office agreed that adopting the Commonwealth of Virginia's lodging policy appeared to be the most viable option. Adoption of this policy would make the County's lodging policy the strictest among local governments in the region while still accommodating the needs of County travelers.

Advance authorization would be required in order for any County traveler to exceed the federal lodging rate limit. In keeping with the State's guidelines, such authorization could be provided by department heads for amounts up to 150 percent of the Federal limit. This lodging exception would be authorized only when circumstances warrant it, and an explanation of the circumstances justifying the exception would be attached to the travel voucher.

Through this approach, the County would be able to rely on the General Services Administration and the Department of State to maintain up-to-date maximum allowable

lodging rates for cities to ensure that employee travel reimbursements are fair and reasonable. The new policy went into effect in Fiscal Year 2005, specifically in October 2004.

We noted that travel expenses, which had been \$4,068,876 in Fiscal Year 2003 and \$4,242,307 in Fiscal Year 2004, dropped to \$3,981,272 in FY 2005, a reduction of \$261,035. While there are other factors that may have accounted for some of the decrease, we believe the new travel policy was the primary reason for the decrease, and have included this reduction in our savings calculation.

In Fiscal Year 2006 and subsequent fiscal years, we believe the County will continue to save money as a result of the new travel policy. However, due to factors such as inflation and an increase in the number of County employees, travel costs have increased making further calculations of savings difficult. Therefore, we are limiting our estimated savings involving travel expenses to one year.

CONTROLS OVER THE USE OF MISCELLANEOUS FUEL CODES

Fairfax County agencies, schools, FASTRAN, and Connector buses use over 9 million gallons of fuel each year. Of that amount, Fairfax County agencies use about 3.9 million gallons a year, or more than 300,000 gallons of fuel each month.

We had, in previous Quarterly Status Reports, discussed the need to better control the fuel provided at the County's 47 fuel locations, especially with regard to the use of miscellaneous codes.

Miscellaneous codes were designed to be used only in certain restricted circumstances. However, the use of miscellaneous codes had grown to the point where about 433,000 gallons were dispensed in FY 2004, (about 36,000 gallons per month), 356,000 gallons in FY 2005, (about 30,000 gallons per month) and 352,000 gallons in FY 2006 (about 29,333 per month) using miscellaneous codes.

Our concern was that a system allowing employees to enter a miscellaneous code when getting fuel could provide an anonymity that could allow some individuals to take fuel for their personal use. Two County employees were arrested, prosecuted and dismissed by the County this year after stealing fuel using miscellaneous codes.

New Controls Over Miscellaneous Fuel Codes

In June 2006 the County took action to tighten controls over fuel, particularly with regard to using miscellaneous codes.

The Department of Vehicle Services worked with Department vehicle coordinators and Department Directors to make changes in the use of the miscellaneous fuel codes.

Changes now in effect have eliminated miscellaneous codes at agencies that did not use them often; limited miscellaneous code use in certain agencies to specific groups and individuals; and added miscellaneous code use in certain agencies to more easily identify users and provide better control. Where possible, access to fuel has been limited to certain locations and fuel types.

In addition, unique driver identification PIN numbers were established, and monthly reports are generated for each agency with details (date, time, quantity and location) for all miscellaneous fuel used.

Fuel Consumption Has Been Reduced

During this quarter, we reviewed the monthly fuel reports generated for County agencies under the new system, and the total monthly use of fuel in September and October to see whether the reduction in fuel we noted in our previous Quarterly Status Report had continued.

Since new controls were instituted in June 2006, the number of gallons charged to the Miscellaneous Code by County agencies over the five month period from June through October 2006 decreased by 60,727 gallons, while gallons charged to agency codes increased by 46,689. This means there was a net reduction of 14,038 gallons compared to FY 2005 figures for those months.

This reduction, if sustained for 12 months, would result in a reduction of 33,691 gallons over a full year.

Prior to this reduction, the amount of fuel issued to County agency vehicles had been increasing, by 197,358 gallons and 84,049 gallons respectively, over the past two Fiscal Years.

At the current average fuel cost to the County for the past five months of about \$2.20 per gallon for unleaded and diesel fuel, the reduction of 14,038 gallons thus far means that County fuel costs decreased by about \$30,884 for the five month period, June through October 2006, when compared to the same five months in 2005. If this reduction continues at the same pace over a year, and average fuel prices remain constant, the savings for FY 2007 would be about \$74,120.

We do not know if all of the reduction is due to the improved controls over fuel. Some of the reduction may be the result of fuel conservation efforts by the County, or other unknown reasons, but we believe that most of it is the result of better controls over fuel.

We believe the reduced use of fuel can continue as long as the new controls remain in place and if the County's agencies continue to review monthly fuel usage reports and take action when they notice something out of the ordinary.

We will continue to look at the fuel usage reports as well.

PUBLIC SAFETY AND TRANSPORTATION OPERATIONS CENTER COSTS

The County plans to build and open a new Public Safety and Transportation Operations Center (PSTOC). PSTOC will provide public safety and transportation services using coordinated technology and integrated data systems among Fairfax County, the Virginia Department of Transportation, and the Virginia State Police.

PSTOC will include an improved Emergency Operations Center, and a new Public Safety Communications Center that will improve the central routing for all 911 calls received in the County.

Also included in this project, but housed in a separate building, is the Fairfax County Police Department Forensics Facility, including the Crime Scene Section, the Electronic Surveillance Unit, the DNA Laboratory, and NOVARIS (the Northern Virginia Regional Identification System).

The County's share of PSTOC, which includes the Emergency Operations Center and Public Safety Communications Center, is \$102.5 million. The Commonwealth of Virginia's share of PSTOC is about \$20 million. The Forensics Facility, which is being co-located with PSTOC, is an additional \$13 million. The total cost of PSTOC including the County and Commonwealth amounts and the Forensics Facility is \$135.5 million.

Because of the cost and relatively short time frame to complete the construction of the project, our office was asked to monitor the project to help provide assurance that it will be completed on time and within budget and will deliver the expected functionality.

Progress This Quarter On the PSTOC Project

The County had awarded a contract to the Manhattan Construction Company for \$56,111,000 in June 2006. The contract amount was in line with County estimates. Construction work began in August 2006.

During this quarter, the contractor stabilized the building site by putting in a silt pond and super silt fences to ensure there would be little or no silt or erosion issues. The contractor also has installed about 75% of the asphalt parking area. Curbs and gutters and onsite utilities, including storm sewer pipe, sanitary sewers and water lines are in place.

The contractor also started limited landscaping on site, and screening of the area with newly planted trees.

The footings and foundation of the building are about 50% completed. In December 2006, the footings and foundation are projected to be completed and the contractor will begin pouring the first floor concrete slab.

By mid December, the steel manufacturer subcontractor will begin fabricating steel components for the building, which will have a steel structure. By mid January 2007, the contractor will begin to bring the steel components to the site. The erection of the steel components is expected to take about 4 ½ months.

County staff said the PSTOC construction was progressing on schedule, and within budget, with substantial completion anticipated in Spring/Summer 2008.

PSTOC Information **Technology Progress**

About \$37 million of the County's PSTOC project cost involves information technology. Timing of the purchases of information technology equipment is very important because while the equipment must be available when the PSTOC becomes operational, the County wants to hold off on purchasing the equipment as long as possible to ensure it has the latest technological changes for the equipment purchased.

Late in 2005, a Request for Qualifications was issued for a Computer Assisted Dispatch (CAD) system and a Records Management System (RMS) resulting in 12 responses. Six of the 12 were pre-qualified, and a Request for Proposals was issued in April 2006. Three of the six responded to the Request for Proposals for the system.

The County is now engaged in an evaluation of the bidders for the CAD/RMS systems. The Technical Proposals submitted by the three vendors have been evaluated, and two vendors are still in the process.

During this quarter, demonstrations of products were conducted by the two vendors in late October and early November in Northern Virginia. Each vendor had about a week to demonstrate what their products could do.

A Technical Advisory Committee met in November to discuss their evaluations of the vendor demonstrations, and prepared a report on their observations. The Selection Advisory Committee has scheduled meetings for November 21 to 27 and will assign scores to the demonstrations.

Cost proposals from the two vendors are under review by the County's Purchasing Department. The Selection Advisory Committee will get the cost proposals on

December 4, 2006, and will review questions prepared by the Purchasing Department regarding the cost proposals.

The week of December 11, 2006, the Selection Advisory Committee will meet to go through the cost proposals in detail.

Part of the process will involve site visits in January 2007 to jurisdictions similar to Fairfax County to observe vendor systems in operation. In February 2007, the County will listen to oral presentations by the vendors regarding their proposed systems. After negotiations with one or both of the vendors, a contract for the CAD/RMS systems is expected to be awarded around April or May 2007.

Acquisition of the CAD/RMS systems, and the other Information Technology systems, continue to be on schedule and within budget.

We will continue to provide periodic updates regarding the status of the PSTOC project in future quarterly status reports.